Amendments to the Claims:

Listing of the Claims:

1. (cancelled).

2. (withdrawn) Use according to claim 1, characterized in that in peptides with formula type (I), the hydrophobic amino acids are alanine, valine, leucine, isoleucine, proline, phenylalanine, tryptophan, tyrosine and methionine, and the other amino acids are:

— non—hydrophobic, possibly non—polar amino acids such as glycine, or polar such as serine, threonine, cysteine, asparagine, glutamine, or

— acid (aspartic or glutamic acid), or

— basic (lysine, arginine or histidine), or

— an association of amino acids in these three categories.

3. (withdrawn) Use according to one of claims 1 or 2, characterized in that the formula (I) type peptide includes 6 hydrophobic amino acids and 10 non-hydrophobic amino acids.

4. (cancelled).

5. (withdrawn) The use of compounds according to the formula (IV) below:

$A\ (-)_m\ (B)_n$ (IV)

where

— A is a peptide as described above in one of claims 1 to 4,

— B is a substance active in diagnosis or therapy for a disorder of the CNS,

— n is 1 or more, and preferably up to 10, and advantageously up to 5,

— $(-)_m$ represents the linker between A and B, where m is 1 or more, and preferably up to 10 and advantageously up to 5,

for the preparation of a medicine capable of passing through the hemato—encephalic barrier to be used in diagnosis or therapy for a disorder localized in the CNS.

6. (withdrawn) Use according to claim 5, characterized in that in
formula (IV), the $(-)_m$ linker between A and B is a covalent, hydrophobic or ionic linker, cleavable or non—cleavable in physiological media or inside the cells, or a mixture thereof.

7. (withdrawn) Use according to claim 5, for the preparation of a medicine intended for the treatment or prevention of brain cancers, Alzheimer's disease, Parkinson's disease, depression, pain, meningitis.

8. (withdrawn) Use according to claim 6, for the preparation of a medicine intended for the treatment or prevention of brain cancers, Alzheimer disease, Parkinson's disease, depression, pain, meningitis.

9. (cancelled).

10. (currently amended) A method for treatment of a Central Nervous System (CNS) disease, comprising administering to a patient suffering from a disease of the CNS a conjugate comprising an active substance for treatment of [a] said disease of the CNS coupled directly or indirectly by a covalent bond to one of the following peptides: SynB1 (SEQ ID NO: 11) or SynB3 (SEQ ID NO: 12); and treating said disease of the CNS, wherein said active substance is an active chemical molecules, and wherein said disease of the CNS is selected from the group consisting of brain cancer, pain and meningitis.

11. (currently amended) A method for driving a substance across the Blood Brain Barrier (BBB) to the Central Nervous System (CNS), comprising:

preparing a conjugate comprising an active substance coupled directly or indirectly by a covalent bond to one of the following peptides: SynB1 (SEQ ID NO: 11) or SynB3 (SEQ ID NO: 12), wherein said active substance is an active chemical molecules; [and]

administering said conjugate to a patient; and

driving one of the following peptides: SynB1 (SEQ ID NO: 11) or SynB3 (SEQ ID NO: 12) across the BBB to the CNS.

12. (new) The method of claim 10, wherein said active chemical molecule is selected from the group consisting of antitumoral agents, antibiotic agents and analgesic agents.

13. (new) The method of claim 11, wherein said active chemical molecule is selected from the group consisting of antitumoral agents, antibiotic agents and analgesic agents.